COURSE DESCRIPTION
REAL ANALYSIS I
MA 645-2F
FALL 2024

DEPARTMENT OF MATHEMATICS
UNIVERSITY OF ALABAMA AT BIRMINGHAM

Course Instructor: Rudi Weikard
Office: UH 4032
Phone#: 934-3720
E-mail: weikard@uab.edu
Zoom: `https://uab.zoom.us/my/rudi.weikard`
Office Hours: Drop in anytime or arrange for an appointment.

Meeting times: TT 3:30 pm – 4:45 pm
Meeting location: UH 4002
Textbook: No textbook required. Lecture notes will be provided.
Canvas: `https://www.uab.edu/elearning/canvas/`

Important dates:

First day of classes: August 26
Labor Day Holiday: September 2
Fall/Thanksgiving Break: November 25 – December 1
Last day of classes: December 6
Final Exam Time Slot: December 10, 4:15 pm — 6:45 pm
Grades available online: December 18

Course content:
- Abstract Integration
- Construction of Measures
- Product Measures
- Complex and Local Measures

Methods of teaching and learning:
- 28 class meetings of 75 minutes consisting of investigations and discussions of concepts, theorems, and examples.
- Students are expected to undertake at least 8 hours of private study and homework per week.

Aims of the course:
The course aims for students to attain a deep understanding of the concepts of

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Date: August 9, 2024.

measure and integral and their applications as evidenced by their ability to reason through the proofs of standard theorems.

Assessment procedures:

- Final grades are determined by participation in class during the course.
- During the term your contributions are counted leading to a number S. Let H be the highest number of contributions achieved by anyone. Your course performance score is going to be S/H if we cover all material or $80S/(100H)$ if not.
- Your final grade is determined according to the following table:

Course performance:	90-100	70-89	50-69	below 50
Final Grade:	A	B	C	F

Presentation procedures:

- A presenter is chosen as the student with the smallest number of points among the volunteers for the current topic. A die is rolled, if necessary.
- You may volunteer for a particular problem by sending an e-mail to me. This (in the order received) establishes priority among volunteers with the same number of points.
- While presenting proofs you may only refer to results known from Advanced Calculus or Topology or to those theorems in the notes that occur before the one you are working on.
- The audience (including the instructor) may ask questions during the presentation.
- After a successful presentation 10 points are awarded. However, if a presenter is unable to defend a statement made they must sit down earning no points.
- It is also possible to work in a group of two or three students. In such a case 4 points will be earned for the presentation while the other 6 are evenly distributed among the collaborators (including the presenter).

Course policies:

- Please make sure that you are able to receive e-mail through your Blazer-ID account. Official course announcements may be sent to that address.
- If you wish to request a disability accommodation please contact DSS at 934-4205 or at `dss@uab.edu`.
- Class attendance is required. After each 3 absences from class 10 points will be subtracted from your course performance score.

Disability Support Services

UAB is committed to providing an accessible learning experience for all students. If you are a student with a disability that qualifies under the Americans with Disabilities Act (ADA) and/or Section 504 of the Rehabilitation Act, and you require accommodations, please contact Disability Support Services for information on accommodations, registration and procedures. Requests for reasonable accommodations involve an interactive process and consist of a collaborative effort among the student, DSS, faculty and staff. If you are registered with Disability Support Services, please contact me to discuss accommodations that may be necessary in

this course. If you have a disability but have not contacted Disability Support Services, please call (205)934-4205 or visit `http://www.uab.edu/dss`.

Title IX Statement

In accordance with Title IX, the University of Alabama at Birmingham does not discriminate on the basis of gender in any of its programs or services. The University is committed to providing an environment free from discrimination based on gender and expects individuals who live, work, teach, and study within this community to contribute positively to the environment and to refrain from behaviors that threaten the freedom or respect that every member of our community deserves. For more information about Title IX, policy, reporting, protections, resources, and supports, please visit the UAB Title IX webpage at `http://www.uab.edu/titleix`.